

LEAVES FROM AN ARCHITECT'S DIARY.
No. 2.

—The practice of committing ideas to paper, or, as it might be expressed, of thinking pen-in-hand,—this form of attentive consideration, and tabular systematizing of thoughts and reflections, would be a greater assistance than many wit of, in the accomplishment of their professional duties. For, as the grand secret of success, that which enables one man to carry on an amount of labour twice as great as another, consists in system and arrangement, so that system can be greatly promoted by the habit to which reference is made. The number of original thoughts which constantly arise and perish, for want of a ready memorandum, would, in minds of no extraordinary capacity, almost equal in importance the more patent results of investigation and labour. The lid blown off by the steam from a kettle, or the apple which fell from the tree, trifling as the incidents might have been to themselves, were really the precursors of discoveries, one of the most important element in the progress of modern science, and the other of the laws which regulate the universe.—Not that any argument can be drawn from this, that research is of little importance; inventions are valuable till certified by experiment, and habits of investigation themselves originate those ideas, which too often disappear almost as soon as they arise.

—Recurring to preceding pages of this Diary,—how many of them are records of exertions, which did not bring an adequate return? Difficulties there may be in every profession; much labour must be gone through—and that we accept willingly—and the main end of labour accomplished only sometimes. But I do not think that in any other profession there is the same indifference to its interests, which characterizes our own. The opinion of an architect, when applied for, and his time, are his property, as the world knows they are in the case of the barrister, and the physician—why repeat any thing an obvious? Because the world will not know this, and the architects seem careless to explain it. Not to mention the new great system of swindling by committees, in competitions, which as much deserve to be the subject of a "blue book," as many that come from the parliamentary press, the extent of which architects themselves are not aware of, and the injurious results of which people generally do not stop to estimate,—the architectural profession to popular eyes is shrouded, and those who are painfully interested make no effort to dispel the mist.—An architect, what is he? Mr. Planché lately told some thousands of people that he was a builder; not an able and honest one, but the perpetrator of those vile productions, built of condemned bricks, and unseasoned timber, to which allusion was made some pages back.†

"Stipulate that houses now should stand," was

"A fallacy, exploded long ago.
As ruinous to architects." a a

for, according to the same authority, if

"Dwellings were to last for ages,
The half of us will not get workman's wages."

I bus a large audience go home every night, each one of them thinking, that all the shaky windows and creaking floors in his house are the work of "these architects,"—not one of whom ever heard of the place—and not only that, but that such mal-construction, it is the interest of the architect to encourage, and that he is rascal enough to do so. "Great is truth, and will"—but nobody says when—"prevail!" one erroneous statement boldly made, and pregnant with sarcasm, lays stronger hold of the popular palate than any truth supported by evidence, but needing the trouble of examination. As the easiest way of teaching children is by rhymes, so the jingle and the satire are recollected, whilst the injustice and the slander are uncared for.—A building is erected,—some wit discovers it is like something, no matter what; from that moment all inquiry into its actual merits is at an end. The dictum is quoted in encyclopædias and popular literature; people who never opened a book on architecture telegraph the jest, and the world assumes it to

be incontrovertible. When you have set before you dishes garnished and spiced, think it not amiss to inquire a little, what may have been the asked state of that particular *entremet*, and though you relish the pepper, and pass by the oil, court rather the plain old English fare, which aims at no deception, and shews precisely what it is.—People will have showy buildings, and will have them cheap;—who answer for it? "Architects." People "save the expense of an architect"—who answer for it? "Architects." Men of science, who make acoustics or ventilation their entire study, fall;—who again bear the brunt? "Architects." A member of parliament the other day argued, that the system of ventilation should be persevered in for the sake of experiment. Ventilation is the architect's business, but who would dream of giving him a building and a separate amount to experiment with.—The clever author of the burlesque is probably, by this time, aware, that architects have had no hand, in the "streets, crescents, and squares," and that it is "the gulls" who "take" the houses who keep up the bad system of building, which architects quite agree with him in denouncing.

—Thus it appears, that the impediments to success in the profession of an architect, arise mainly from the want of familiarity in the public with the nature and value of his labours, and the proper mode of remunerating them, leading them to consider the pursuits of architect and builder as identical, to ask that from the architect, which in any other case, they would not think of accepting without the equivalent; to which it is necessary to add, the too facile acquiescence of architects themselves, in what tends alike to their own detriment, and that of every one else, to health and personal comfort, in mind, body, and purse. Architects must become true cosmopolites; let them enter into the world, and advocate the improvement of taste, and the scientific construction of buildings on the principle of public good, and they will so best advance their own immediate interests.

PROHIBITION OF SMOKE.

REPORT BY SIR HENRY DE LA BECHE AND DR. PLAYFAIR.

Our readers may remember that a bill for the general suppression of smoke, before the House last session, was withdrawn upon an understanding that a subject of such admitted public importance should be left in the hands of the Government, and that some measure having this for its object should be submitted to Parliament by them.

Before doing this, the Government thought it desirable to refer the matter to Sir Henry De la Beche and Dr. Playfair, directing them to inquire, amongst other things, into the means at present adopted for the prevention of smoke in various parts of the kingdom.

We take the following from the report of these gentlemen now published:—

"The general principles upon which the combustion, or rather the prevention of smoke, may be effected are now well known, and admitted to be applicable in practice. Smoke consists of vapours produced by the partial combustion or distillation of coal, carrying up small particles of the fuel in mechanical suspension, and depositing, by the combustion of one of their constituents, carbonaceous matter in a fine state of division. The mode of preventing this smoke is to admit a sufficient quantity of air to effect the combustion of the carbonaceous matter, when the vapours are of a sufficiently elevated temperature to unite entirely with the oxygen of the air. If the temperature be not sufficiently elevated, the hydrogen of the vapours alone is consumed, and the carbon is separated in the fine state of division referred to. The gases produced by the complete combustion of fuel are colourless and invisible, and therefore do not come under the definition of the term smoke.

As the prevention of smoke implies the complete combustion of fuel, the result, as an abstract statement, always is, that more heat is generated, and a saving of fuel effected, when it is so consumed as to prevent the emission of smoke; but although this theoretical conclusion is undoubtedly correct, the practical results are not always consonant with this statement.

In consuming smoke in the usual way a quantity of cold air is introduced into the fire, and as this must be heated up to the temperature of the surrounding fuel, the loss of the latter may be equal to, or even greater than, the saving of the fuel from the combustion of the products of distillation. This often results in the careless use of furnaces constructed on the principle of smoke prevention, and thus leads to the contradictory statements given by those who have used such furnaces. But in all carefully conducted experiments the saving of fuel has been considerable, and the reason of this will be at once perceived, when it is considered that in addition to the combustion of the products of distillation there is a large amount of fuel saved by the combustion of a gas called carbonic oxide, formed by the proper product of combustion, carbonic acid, taking up in its passage through the incandescent fuel, another portion of carbon, which escapes useless as regards the production of heat, unless burned by the air introduced at the bridge of the furnace, for the purpose of consuming the products of distillation.

From these considerations, and from experiments conducted under our inspection, with a view to determine this point to our satisfaction, we arrive at the conclusion, that although from careless management of fires there is often no saving, and that indeed there is frequently a loss of heat in the prevention of smoke, still that with careful management the prevention of smoke is in many cases attended with, and may in most cases be made to produce, an economy of fuel.

It may be unnecessary to remind your lordship that the cause of the emission of smoke in manufactories may be classed under three different heads, the relative importance of which involves very different considerations in any attempt to legislate for its prevention. These are,

1. The want of proper construction and adjustment between the fire-places and the boilers, and the disproportionate size of the latter to the amount of work which they are expected to perform; 2. The deficiency of draught, and improper construction of the flues leading to a chimney of inadequate height or capacity; 3. The carelessness of stoking and management by those entrusted with the charge of the fire-places and boilers."

Into some of the local acts for the suppression of smoke, provisions were introduced which have rendered them to a great extent inoperative.

"Most of the recent acts for this purpose are founded on the clause in the Derby Improvement Act, which enjoins a penalty 'for or in respect of every week during which such furnace or annoyance shall be so used or continued.' Now, as it cannot be proved that smoke does continue without cessation for a 'whole' week, seeing that, in all chimneys, there are periods when no smoke is emitted, and that smoky chimneys do not emit opaque smoke more than 20, and in the worst cases not more than 30, minutes in the hour, and that at night the small amount of fire kept on in the furnaces prevents the emission of smoke, no conviction can be obtained under this Act. Eminent legal authorities have been consulted, and have stated as their opinion, that for the purposes of conviction, it is essential to prove that a furnace continues to smoke for a whole week without interruption."

Relative to various Acts:—

"The general result of the examination is that they have proved unsuccessful,

1. From legal difficulties in procuring a conviction under the present ambiguous wording of the smoke clauses.

2. From inefficient supervision, and want of compulsory powers to make the execution of the Act imperative.

3. From want of adjustment in the amount of penalties, which in some cases are so small as to be practically useless; in others so large, and accompanied with so much expense in obtaining the conviction, as also to be inefficient.

Lord Lincoln's letter does not authorize us to make any recommendation as to legislative enactments; but it may be proper to mention that in every locality statements were made to us, that the only mode of obtaining an abatement of the nuisance was by summary convic-

† Vide p. 181, ante.

‡ Vide "Leaves from an Architect's Diary," ante p. 176.